

Claim Listing

1. (Previously presented) A method for setting up a call to a subscriber station comprising:

receiving a first request to set up a call from a calling number to a called number of a subscriber station, the first request carrying the calling number and the called number;

processing the first request at a service node and providing, from the service node, a second request to set up the call to the called number of the subscriber station, the second request including the calling number, the called number, and a non-loop parameter to indicate that call setup signaling has already occurred to the service node and thus to help avoid endless looping of call setup signaling to the service node;

receiving the second request at a switch and responsively sending a service request including the non-loop parameter to a service control point; and

detecting the non-loop parameter at the service control point and, in response to at least the non-loop parameter, directing the switch to set up the call to the subscriber station.

2. (Original) The method of claim 1, wherein processing the first request comprises applying pre-paid call processing logic.

3. (Original) The method of claim 1, wherein processing the first request comprises applying custom ring-back tone processing logic.

4. (Original) The method of claim 1, wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM), and wherein the non-loop parameter comprises predefined digits included in a ReDirectingNumber parameter of the ISUP IAM.

5. (Original) The method of claim 4, wherein the ISUP IAM is mapped to a Signaling System 7 (SS7) message in accordance with the Wireless Intelligent Network (WIN) IS-771 standard.

6. (Original) The method of claim 1, wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM), and wherein the non-loop parameter comprises predefined digits included in an Original Called Party Number parameter of the ISUP IAM.

7. (Original) The method of claim 6, wherein the ISUP IAM is mapped to a Signaling System 7 (SS7) message in accordance with the Wireless Intelligent Network (WIN) IS-771 standard.

8. (Original) The method of claim 7, wherein the non-loop parameter is mapped to a WIN parameter in the SS7 message.

9. (Original) The method of claim 1, wherein the second request comprises a Session Initiation Protocol (SIP) INVITE message, and wherein the non-loop parameter comprises predefined digits included in a parameter of the SIP INVITE message.

10. (Original) The method of claim 9, wherein the SIP INVITE message is mapped to a Signaling System 7 (SS7) message in accordance with the Wireless Intelligent Network (WIN) IS-771 standard.

11. (Original) The method of claim 1, wherein receiving the first request at the switch comprises receiving the first request at a mobile switching center.

12. (Original) The method of claim 1, wherein receiving the first request at the switch comprises receiving the first request at a public switched telephone network switch.

13. (Original) The method of claim 1, further comprising generating one of an Advanced Intelligent Network (AIN) trigger and a Wireless Intelligent Network (WIN) trigger in response to receiving the first request and, as a result, generating a query for seeking call processing guidance from the service control point.

14. (Previously presented) A method for setting up a call to a subscriber station comprising:

at a telecommunications switch, receiving a first request to set up the call from a calling number to a called number of the subscriber station;

responsive to the first request, sending, from the switch to a service control point (SCP), a first query seeking call processing guidance;

at the switch, receiving, from the SCP, a response to the first query directing the switch to set up the call to a service node (SN);

at the SN, applying service logic and providing, to the switch, a second request to set up the call to the subscriber station, wherein the second request comprises the calling number, the called number, and a non-loop parameter to indicate that call setup signaling has already occurred to the SN and thus to help avoid endless looping of call setup signaling to the SN;

receiving the second request at the switch;

responsive to the second request, sending, from the switch to the SCP, a second query seeking call processing guidance, the second query including the non-loop parameter;

detecting the non-loop parameter in the second query at the SCP, and responsively sending, from the SCP to the switch, a directive to set up the call to the subscriber station rather than to the SN; and

receiving the directive at the switch and responsively setting up the call to the subscriber station.

15. (Original) The method of claim 14, wherein applying the service logic in the SN comprises applying pre-paid call processing logic.

16. (Original) The method of claim 14, wherein applying the service logic in the SN comprises applying custom ring-back tone processing logic.

17. (Original) The method of claim 14, wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM), and wherein the non-loop parameter comprises predefined digits included in a ReDirectingNumber parameter of the ISUP IAM.

18. (Original) The method of claim 14, wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM), and wherein the non-loop parameter comprises predefined digits included in an Original Called Party Number parameter of the ISUP IAM.

19. (Original) The method of claim 14, further comprising generating a Wireless Intelligent Network (WIN) trigger in response to receiving the first request at the switch, wherein the first query is generated in response to the WIN trigger.

20. (Original) The method of claim 14, wherein the second query is generated in response to a Wireless Intelligent Network (WIN) trigger, and wherein the WIN trigger is generated as a result of the switch receiving the second request.

21. (Previously presented) A system for setting up a telephone call comprising:
a switch for receiving a first request to set up the telephone call from a calling number to a called number of a subscriber station;

a service control point (SCP) coupled with the switch, the SCP comprising service logic for providing call processing guidance to the switch; and

a service node (SN) coupled with the switch for providing one or more telecommunication services to the subscriber station, the SN comprising service logic for generating and sending a second request to the switch to set up the call to the subscriber station, the service logic including instructions for including in the second request (i) the calling number, (ii) the called number, and (iii) a non-loop parameter to indicate that call setup signaling has already occurred to the SN and thus to help avoid endless looping of call setup signaling to the SN,

wherein the service logic of the SCP comprises instructions for recognizing the non-loop parameter in the second request and further instructions for responsively providing guidance to the switch to set up the call to the subscriber station rather than again to the SN.

22. (Original) The system of claim 21, further comprising a signal transfer point (STP), wherein the switch and the SCP are coupled via the STP, and the switch and the SN are also coupled via the STP.

23. (Original) The system of claim 22, wherein the SCP is coupled with the STP via a Signaling System 7 (SS7) communication link.

24. (Original) The system of claim 23, wherein the SS7 communication link is an SS7 over Internet Protocol link.

25. (Original) The system of claim 21, wherein the switch is coupled with the SN
via a voice services trunk connection.